

## **ENGINEERING DIRECTIVE**

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CHIEF ENGINEER

### **Use of Stay-in-Place Forms for Bridge Deck Construction**

The purpose of this Engineering Directive is to provide guidelines for the use of Stay-in-Place (SIP) Forms for the construction of bridge decks on MassDOT highway bridge projects.

Although SIP forms offer many advantages for forming and constructing bridge decks, these forms also block the underside of the deck from view so that the actual condition of the deck, as constructed or after years of service, cannot be ascertained. When SIP forms are present, bridge inspectors must infer the condition of the deck based on the condition of the SIP forms (i.e. rust spots, water leakage, etc.) This method does not allow for a proper determination of the actual deck condition and therefore, may result in condition ratings that are higher than the actual condition of the deck.

In order to balance the ease of construction with hands-on inspection needs, MassDOT shall limit the use of SIP forms as provided below. In these locations, removable forms must be used.

1. SIP forms shall not be used in deck bays, full length of the bridge, that are directly under the curb or barrier line.
2. SIP forms shall not be used in deck bays, full length of the bridge, where there is a stage construction joint.

Based on the structure type and deck configuration, the Bridge Inspection Unit may identify additional bays where in the past it has been found that the deck is subject to accelerated deterioration, and for that reason, hands-on inspection access is needed and SIP forms shall not be used. These locations may be included in the *Bridge Manual* or other engineering guidance materials, as they are identified.

This Engineering Directive is effective immediately for all bridge projects that have not been advertised for construction.